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EXAMINER
LEE, H

26M1/1028

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ART UNIT	PAPER NUMBER
2608	10

DATE MAILED: 10/28/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☑ Responsive to communication filed on 07/27/94 ☑ This action is made final

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474..
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☑ Claims 1-21 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☑ Claims 3, 4, 6-9 and 17-21 have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☑ Claims 1, 2, 5, 10-16 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev. 2/93)

1. Claim 5 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 2, "resilient mounting means" lacks antecedent basis.

2. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 1, 2, 12, 13 and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Voroba et al in view of Langford.

Regarding claims 1, 2, 12, 13 and 16, Voroba shows an insert earphone comprising: receiver means (70) including terminals (not numbered) for receiving an input electrical signal and an outlet (not numbered); electrical coupling means (62, 64); acoustic coupling means (30) having an opening (34); housing

means (20, 30, 34, 72, 74, 76) including a chamber portion and tubular portion (34, 76), and a passage having an inlet end portion. Voroba reference differs from claims 1, 2, 12, 13 and 16 of the present invention in that it is not provided acoustic damper means comprising a screen at the outlet of the receiver. However, providing an acoustic damper at the outlet of an earphone is very well known; further, Langford teaches an acoustic damper means (41, 34) supported within the outlet portion of the receiver means (See figures 1, 2). Since Voroba et al. and Langford teach an earpiece having the outlet of the receiver inserted into the ear of the user, it would have been obvious to one skilled in the art to provide the acoustic damper means, as taught by Langford, in the Voroba earpiece in order to avoid overdriving eardrum as a result of louder-than normal sound and also to use the damper means as a filter for cleaning.

Regarding claim 13, Voroba et al in view of Langford shows the enlarged size of the end section of the tubular portion to limit movement of the damper.

Regarding claim 12, Voroba in view of Langford lacks the teaching of eartips of foam material. However, the eartips of foam material is just in the preamble; further, Voroba does teach the covering (30) made of a soft, resilient material (See column 9, lines 21, 22). Since Voroba does not restrict any kind of material for the art tips, it would have been obvious to one

skilled in the art to provide the soft, resilient material such as the foam material at the Voroba eartip for providing the comfort to the wearer.

Regarding claim 16, Voroba et al shows the protective shield and the end cap (100) of the housing.

2. Claims 5, 14 and 16 are rejected under 35 U.S.C. § 103 as being unpatentable over Voroba et al in view of Langford as applied to claim 1 above, and further in view of Busse.

Regarding claims 5, 14 and 16 Voroba et al in view of Langford lack the teaching a resilient foam mounting means as claimed. However, Voroba et al teach a cushion (72, 74, 76) encasing a receiver (70) to minimize mechanical vibration feedback. The cushion has been well-known to use for the pillow including a foam rubber. Further, using foaming material to support a transducer is known in the art. In addition, Busse teaches a foam material supporting a transducer (183). Therefore, it would have been obvious to one skilled in the art to provide the foam material as taught by Busse encasing the Voroba receiver for the same purpose of minimizing mechanical vibration feedback.

Regarding claim 14, Voroba et al in view of Langford and Busse or Gauthier lack the teaching of the foaming ear tips.

However, providing the foaming ear tips in the insert earphone for the comfort of the user is very well known in the art. This would have been obvious to combine in the combination above.

3. Claim 15 is rejected under 35 U.S.C. § 103 as being unpatentable over Voroba et al in view of Langford and Busse as applied to claim 14 above, and further in view of Kelsey.

Regarding claim 15, Voroba et al in view of Langford differ from these claims in that Voroba and Langford do not specifically disclose the acoustic coupling means of reduced cross sectional size dimensioned to releasably lock the housing and the acoustic coupling means. Kelsey teaches this acoustic coupling means (10A, 10B, 10C and column 3, lines 40-49). Since Voroba in view of Langford teach an earplug inserted into the ear, it would have been obvious to one skilled in the art to provide the acoustic coupling means, as taught by Kelsey, at the outlet portion of the Voroba et al in view of Langford for the comfort of the wearer and the pleasing appearance.

4. Claims 10 and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over Voroba et al in view of Langford as applied to claim 1 above, and further in view of Killion (4,677,679).

Voroba in view of Langford shows the electrical coupling means installed within the housing between the end cap members and the receiver (See figures 1, 2, of the Voroba reference). Voroba in view of Langford differ from claims 10, 11 of the

present invention in that it is not provided the connection of the electrical coupling means with the capacitors and resistors as claimed. However, Killion ('679) teaches an equalization network circuit 40a (See figure 4) between the signal generator and the receiver of an insert earphone, these circuits comprise the resistors and the capacitor connected as claimed. Since connecting an equalization network having the connections of the capacitors and the resistors between the input and output terminals for equalization is well known in the art; it therefore would have been obvious to one of ordinary skill in the art to provide the equalization circuit, as taught by Killion ('679) in the Voroba earphone for obtaining a frequency response characteristic which matches with the human ear.

5. Applicant's arguments filed July 27, 1994 have been fully considered but they are not deemed to be persuasive.

Responding to the argument of providing a high fidelity earphone, the applicant is noted that the high fidelity earphone is just found in the preamble of the claim and the limitation of "high Fidelity" is not repeated in the body of the claim; therefore, the limitation of a high fidelity earphone does not effect the portion of the claim.

Responding to the argument about the acoustic seal between the output of the receiver and the ear canal, the applicant is noted that the vents (130, 132, 133) are in the shell (20), the

Voroba hearing aid structure still has the acoustically sealed passage to the ear canal by the eartip (30a, 30b, 30c, 30d and 30e).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Le whose telephone number is (703) 308-5318.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4750.

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
GROUP 2600

Huyen Le/skf
October 17, 1994